DIRECT TESTIMONY OF
JOSEPH K. TODD
ON BEHALF OF
SOUTH CAROLINA ELECTRIC & GAS COMPANY
DOCKET NO. 2008-2-E

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION WITH SOUTH CAROLINA ELECTRIC & GAS COMPANY ("SCE&G" OR "COMPANY").

A. Joseph Todd, 111 Research Drive, Columbia, South Carolina. I am employed by South Carolina Electric & Gas Company as General Manager, Fossil & Hydro Operations.

Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND YOUR BUSINESS EXPERIENCE.

A. My degree is a B.S. in Civil Engineering from Clemson University. I began my career with Duke Power in 1980 working as a structural engineer for several nuclear plants. I started working with SCE&G in 1981 as a Structural Engineer for V.C. Summer nuclear station in Jenkinsville, SC. In this capacity, I participated in the startup and initial operation of this facility and continued working at V.C. Summer until 1990. In 1990, I transferred to the Fossil/Hydro division of SCE&G and assumed a project management role for initial work on the Cope project along with a number of other environmental projects. I also served as Assistant Manager of McMeekin Station from 1995 to 1998 before returning to a project management role for several environmental projects including SCR

installations at Williams and Wateree. Subsequent roles included Business Manager of the Company's power operations on the Savannah River Site, and Manager of Fossil/Hydro Outage Planning. I assumed the role of General Manager, Fossil & Hydro Operations in February of 2007. In this position, I report to the Vice President of Fossil Hydro Operations.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to review the operating performance of SCE&G's Fossil/Hydro units and South Carolina Generating Company's ("GENCO") Williams Electric Generating Station ("Williams Station") during the period February 1, 2007 through January 31, 2008 ("Review Period").

Q. PLEASE GIVE A SHORT DESCRIPTION OF SCE&G'S FOSSIL AND HYDRO ELECTRIC FACILITIES.

A. SCE&G owns and operates ten (10) coal-fired fossil fuel units (2,484 Mw), eight (8) combined cycle gas turbine/steam generator units (gas/oil fired, 1,319 Mw), eighteen (18) peaking turbines (348 Mw), four (4) hydroelectric generating plants (227 Mw), and one Pump Storage Facility (576 Mw). The total net non-nuclear summer generating capability rating of these facilities is 4,954 megawatts.

Q. PLEASE EXPLAIN TO THE COMMISSION GENCO AND ITS RELATIONSHIP TO SCE&G.

A. GENCO was incorporated October 1, 1984, as a SCANA subsidiary. GENCO owns the Williams Station. GENCO sells to SCE&G the entire capacity and output from the Williams Station under a Unit Power Sales Agreement approved by the Federal Energy Regulatory Commission. Hereafter when I refer to SCE&G's fossil steam plants, I include GENCO.

Q. HOW MUCH ELECTRICITY WAS GENERATED BY SCE&G IN THE TWELVE MONTH REVIEW PERIOD?

A. In the review period, SCE&G generated 26,780,000 megawatt hours of energy which included a record setting day for usage by SCE&G's customers. On August 10, 2007, the temperature reached 107 degrees in Columbia and 99 degrees in Charleston causing air conditioners to work overtime in the scorching heat. As a result, SCE&G's territorial customers used a record 100,213 megawatt hours of electricity topping the previous high of 99,299 megawatt hours, which was set two days earlier on August 8, 2007. Additionally, on August 10, 2007, SCE&G's territorial peak demand reached 4,998 megawatts for the one-hour period ending 4 p.m., eclipsing the previous high mark of 4,955 megawatts.

Q. WHAT WAS SCE&G'S GENERATION MIX DURING THE REVIEW PERIOD?

A. Of the energy generated by SCE&G during the test period, fossil steam plants generated 64%, combined cycle units generated 12%, gas peaking turbines and hydro facilities generated 4%, and the nuclear plant

generated 20%. Exhibit No. ___ (JKT-1) provides a graphic display of how the generation met this review period's energy demand.

Q. PLEASE SUMMARIZE THE PERFORMANCE OF THE FOSSIL UNITS DURING THE REVIEW PERIOD.

A. Overall, SCE&G's fossil units have operated efficiently and dependably in the twelve (12) month period of February 1, 2007 through January 31, 2008, as indicated by their heat rates, availability factors and capacity factors.

Q. PLEASE DEFINE HEAT RATE.

A. Heat rate is a measure of the thermal efficiency of a power plant's fuel cycle. It is the number of British Thermal Units (Btu) of fuel required to generate one (1) kilowatt-hour (kWh) of electricity.

Q. WHAT WAS THE HEAT RATE OF SCE&G'S FOSSIL UNITS DURING THE REVIEW PERIOD?

A. The combined steam unit's heat rate for SCE&G's fossil units for the period February 1, 2007 through January 31, 2008 was 9700 Btu/kWh. Of all SCE&G's fossil plants, Cope Station had the best 2007-2008 heat at 9174 Btu/kWh followed by McMeekin Station at 9470 Btu/kWh.

Q. HOW DOES SCE&G'S HEAT RATE COMPARE NATIONALLY?

A. The most recent national heat rate comparisons I am aware of are those that were published in the December 2007 issue of *Electric Light & Power*. That comparison reflects results for calendar year 2006. In that

comparison, SCE&G was recognized for having two of its plants listed in the top 20 most energy efficient coal fired plants in the nation for 2006. Cope Station ranked 8th at 9267 Btu/kWh and Williams Station ranked 18th at 9547 Btu/kWh. This ranking means that in 2006 a significant portion of our fossil fired generating capacity is ranked in the top 20 plants in the country for efficiency. It is also worth noting that McMeekin Station missed being in the top 20 by only 17 BTU/Kwh and its 2007-2008 results would have clearly earned it a place in the 2006 ranking.

Q. PLEASE DISCUSS THE AVAILABILITY OF SCE&G'S FOSSIL PLANTS DURING THE REVIEW PERIOD.

A. SCE&G fossil plant availability factor was 84.88% for the review period. Availability factor is a measure of the actual hours that the generation units are available (overall readiness to provide electricity) divided by the total hours in the 12 twelve-month review period. Availability is not affected by how the unit is dispatched or by the demand from the system when connected to the grid. However, it is impacted by the planned and maintenance shutdown hours. The North American Electric Reliability Council ("NERC") national five year (2002-2006) average for availability from all units was 87.37%. SCE&G's availability factor was slightly lower than the NERC national five-year average due to the major planned outages discussed later in my testimony. However,

during the summer peak period, June 1, 2007 through September 30, 2007, SCE&G operated at an availability factor of 93.05%.

Q. PLEASE DISCUSS SCE&G'S PLANNED OUTAGES FOR THE PERIOD UNDER REVIEW.

A. As part of the Company's maintenance program, SCE&G undertook planned outages at Canadys Unit #1, McMeekin Unit 2, and Wateree Unit 1 in the Spring of 2007 for major turbine maintenance. SCE&G also performed other boiler maintenance and balance of plant maintenance on these plants during these outages.

A scheduled outage took place in the Fall of 2007 for major turbine maintenance and condenser repairs on Urquhart Unit 2. Urquhart Unit 2 is one of the two combined cycle steam turbine units located at the Urquhart site. In addition, several plants or units took one or two week scheduled outages for normal maintenance during various times throughout review period with no significant impact on system performance.

Q. WHAT HAS BEEN SCE&G'S SYSTEM FORCED OUTAGE RATE FOR THE PERIOD UNDER REVIEW?

A. During the review period, SCE&G experienced a system forced outage rate on its fossil fueled steam units of 3.98%. "Forced outage rate" is the percentage of the total hours that generating units are forced out of service (for various reasons) compared with the total hours in service for a

period. The NERC national five year (2002-2006) average for forced outage rate for all units is 5.78%.

Q. PLEASE DISCUSS ANY SIGNIFICANT FORCED OUTAGES FOR THE PERIOD UNDER REVIEW.

A. On July 27, 2007, the main generator step-up transformer at Canadys Unit #1 experienced a failure which caused a forced outage on this unit. The Company traced the transformer failure to a low side, B-phase winding failure. The failure was the result of a result of a phase-to-ground fault.

After an initial investigation, SCE&G determined that the transformer could not be repaired on site and contacted vendors and other utilities to determine whether a temporary replacement transformer could be obtained from off-system. These discussions indicated that obtaining a spare transformer from outside sources would involve significant delays in restoring the plant to service and would also require costly facility modifications to accommodate the replacement transformer when it became available. Simultaneously, SCE&G conducted an engineering review of the uncommitted spare transformers available on its own system to determine if it might be possible to configure any of them to be compatible with the requirements of Canadys Unit #1. An available spare transformer was located at SCE&G's McMeekin Station and engineering studies were conducted that showed that this transformer could be configured for use at Canadys Unit #1. Shortly thereafter, SCE&G made arrangements to

transport the 130-ton transformer to Canadys and procured alternate electrical isophase equipment to allow the transformer to be connected on the site. After transport to the site, foundation work and electrical hookups were completed and the transformer was installed. On September 7, 2007, SCE&G returned Canadys Unit #1 to service. The original transformer, which had been in service for over 40 years, was removed to the manufacturer's facilities where it will be rewound and returned to service at Canadys Unit #1 during a future outage.

Q. PLEASE DISCUSS THE STATUS OF THE STEAM TURBINE UNIT AT JASPER GENERATING STATION.

A. As discussed in my testimony in the SCE&G 2007 Fuel Clause Proceeding, the Jasper steam turbine unit experienced a forced outage on February 27, 2006 due to a phase-to-ground short on the generator stator. This short was determined to be the result of excessive vibration in the end windings for the stator. During the outage, SCE&G worked with the original equipment manufacturer ("OEM") to implement a fix to reinforce the damaged set of end windings. The plant was returned to service on May 28, 2006.

During the May 2006 outage, vibration monitoring equipment was installed on the unit. Based on the result of vibration monitoring using this equipment, SCE&G decided to make repairs and reinforce a second set of end windings in the unit during an outage in December of that year. The

unit was returned to service and has been operated successfully since that time. However, the level of vibration in the generator core has remained a matter of concern.

Over the past year, SCE&G has reached an agreement with the OEM to install a bracing system on the end windings of the generator at their expense. This bracing system was installed in a fall 2007 outage and has resulted in a significant reduction in the vibration of the end windings. In addition, SCE&G has settled its claims against the OEM related to the vibration problem in the generator core in exchange for an agreement by the OEM to redesign the mid-section of the unit and to provide SCE&G with a new mid-section. SCE&G expects this new mid-section will eliminate the vibration problems in the unit long-term. This new generator mid-section is scheduled for installation in a spring 2010 outage. SCE&G and the OEM will continue to monitor vibration readings on this unit closely until the new mid-section is installed.

Q. WHAT IMPROVEMENTS HAS THE COMPANY MADE TO EMISSIONS MONITORING AT ITS COAL FIRED PLANTS?

A. The Company's Sulfur Dioxide ("SO2") and Nitrous Oxide ("NOx") emissions are measured using a Continuous Emission Monitoring ("CEM") System installed on the stacks at our coal fired plants. A major factor in the determination of emissions from these units is the flow rate of exhaust gases as measured by these monitors. The amount of emissions that these

CEMs measure is important because these measured amounts are used in determining SCE&G's need to purchase or consume emission allowances and as used by SCE&G in reporting its overall compliance with air quality regulations.

In 2006, SCE&G undertook an improvement project to increase the accuracy of the flow meters used for the CEMs. In 2006, new calibration equipment, called Auto-probe, was used to calibrate the CEMs flow meters installed at its coal plants. As we hoped, this new equipment has resulted in reduced SO2 and NOx emissions as measured on our coal fired units and as reported to EPA and DHEC. Specifically, the more accurate monitoring equipment has contributed to a 14.46% reduction in reported SO2 emissions from our coal plants in 2007 compared to 2006 and a 7.19% reduction in measured ozone season NOx emissions from these plants compared to 2006. This resulted in lower consumption of emission allowances and greater operational flexibility for SCE&G's fossil plants.

Q. DO YOU HAVE ANY CLOSING COMMENTS?

A. Yes. I believe my testimony demonstrates that SCE&G continues to operate its fleet of fossil/hydro plants efficiently and reliably to the benefit of its customers and the State of South Carolina.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

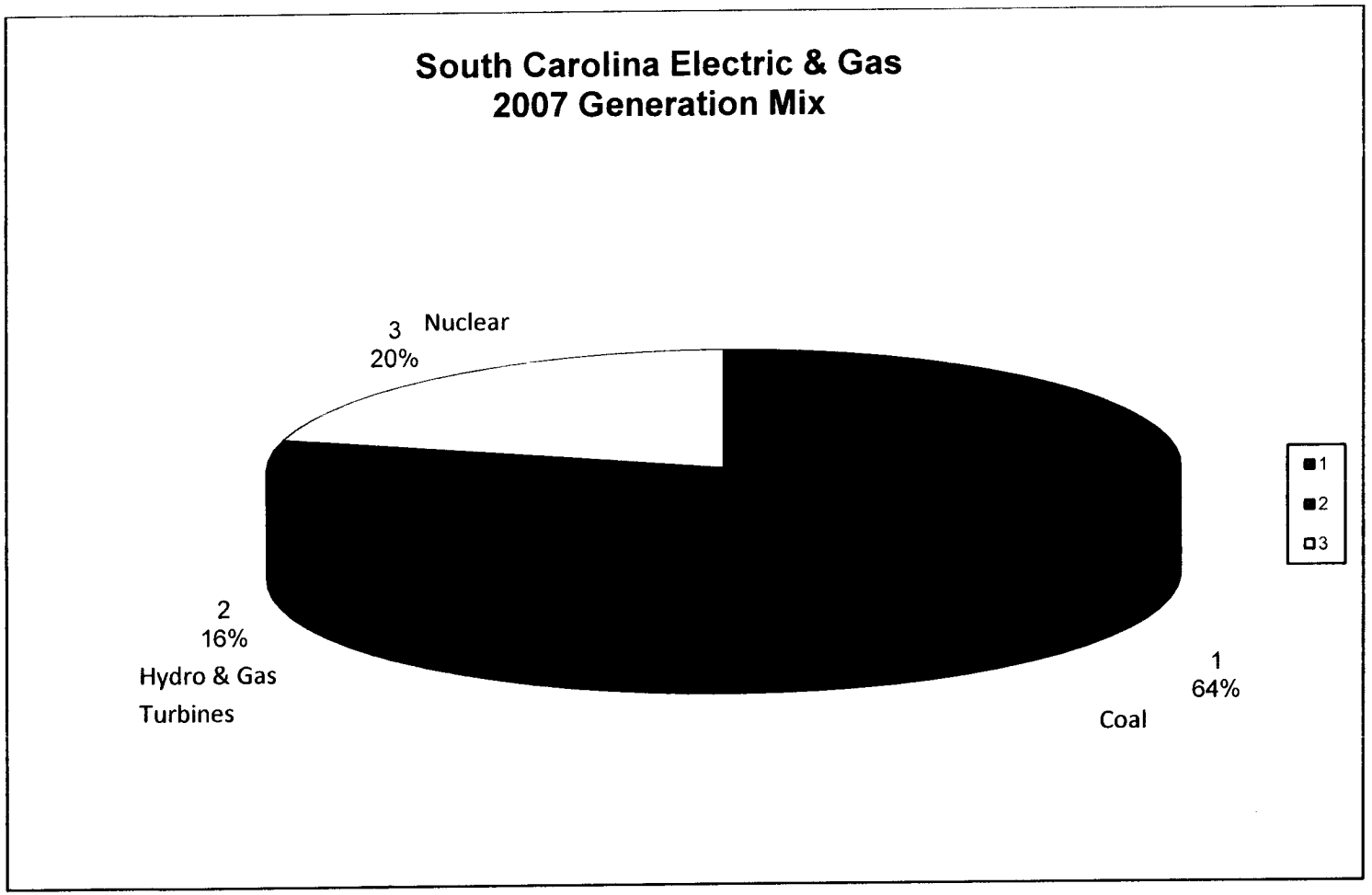

Exhibit No. ____ (JKT-1)

DIRECT TESTIMONY OF
GERHARD HAIMBERGER
ON BEHALF OF
SOUTH CAROLINA ELECTRIC & GAS COMPANY
DOCKET NO. 2008-2-E

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND CURRENT POSITION.

A. Gerhard Haimberger, 1426 Main Street, Columbia, South Carolina. I am employed by SCANA Services, Inc. as General Manager, Fuel Procurement and Asset Management, providing fuel and transportation purchasing on behalf of South Carolina Electric & Gas Company ("SCE&G" or the "Company").

Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND YOUR BUSINESS EXPERIENCE.

A. I have a Bachelor of Science Degree in Mining Engineering from the Colorado School of Mines in Golden, Colorado, and am a registered professional engineer. I have been involved in fuel production or procurement for over thirty years. In July 2003, I was employed by the SCANA Services, Inc. in my current position and report directly to the Senior Vice-President, Fuel Procurement and Asset Management, SCANA Services, Inc.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to describe the procurement and delivery activities for fossil fuel (coal and oil) used in electric generation

for SCE&G and GENCO's Williams Station for the period February 1, 2007 through January 31, 2008 (the "Review Period") and to comment on the current state of the U.S. coal industry.

Q. PLEASE EXPLAIN TO THE COMMISSION SOUTH CAROLINA GENERATING COMPANY ("GENCO") AND ITS RELATIONSHIP TO SCE&G.

A. South Carolina Generating Company, Inc., ("GENCO") was incorporated October 1, 1984. GENCO owns the Williams Electric Generating Station. GENCO sells to SCE&G the entire capacity and output from the Williams Station under a Unit Power Sales Agreement approved by the Federal Energy Regulatory Commission. Hereafter when I refer to SCE&G's fossil steam plants, I include GENCO.

Q. PLEASE SUMMARIZE SCE&G'S FUEL PROCUREMENT NEEDS AND PURCHASING PRACTICES.

A. The Fuel Procurement Department (coal and oil) ("Fuel Procurement") purchases all necessary coal, fuel oil and associated transportation for SCE&G's fossil plants focusing on reliability of supply, conformity with operational and environmental requirements, and securing reasonable prices. We also purchase or trade EPA (Environmental Protection Agency) sulfur-dioxide (SO2) and nitrogen-oxide (NOx) emission allowances as determined by SCE&G.

Q. HOW DOES THE COMPANY SECURE THE NECESSARY QUANTITIES OF COAL AND OIL AT COMPETITIVE PRICES?

A. SCE&G maintains an active list of qualified suppliers of coal and fuel oil used to power its plants. Typically, as contracts expire or needs are identified, solicitations are tendered for competitive sealed bids.

Q. HOW DOES SCE&G APPROACH THE MARKET PLACE FOR COAL AND FUEL OIL?

A. Coal is procured with long-term (more than one year) and spot purchase (up to one year) agreements to achieve a balance of reliable supplies and flexibility to react to market changes or short-term system needs. We seek to have long-term purchases represent approximately 75 to 80 percent of projected system demand and typically are written with variable quantity clauses when market leverage allows. Variable quantity clauses, when available and spot purchases provide the mechanisms to manage inventories and react to short-term changes in the marketplace should prices become more competitive. By utilizing spot purchases, SCE&G has been successful in taking advantage of favorable spot market prices and managing its inventory.

Fuel oil contracts are requirements contracts that are competitively solicited every two years.

Q. HOW DOES SCE&G ASSURE THE RIGHT QUANTITY OF FUEL SUPPLIES TO MEET GENERATION DEMANDS?

A. SCE&G uses several methods to bring the fuel supply and demand factors together. Fuel usage levels are calculated and forecast for each of the generating plants. Coal and fuel oil inventories are then validated and contract quantities are summed and compared against system usage to determine needs going forward. With this information, Fuel Procurement looks at the coal requirements and determines whether contract options, spot purchases or additional long term agreements are appropriate. Throughout the years, SCE&G has been successful in leveraging long-term and short-term coal purchases to achieve reasonable purchase prices while assuring the reliability of coal supplies necessary to support system needs.

Fuel oil inventories are purchased to ensure adequate back up to natural gas for SCE&G's intermediate and peaking generators. Contracts are awarded on a biannual basis using competitive bids. Typically, fuel storage tanks are filled going into peak usage periods and reduced to lower levels throughout the shoulder months to protect fuel quality.

Q. HOW DOES THE COMPANY MANAGE COAL INVENTORIES TO INSURE RELIABILITY AND AVAILABILITY?

A. The Company attempts to maintain approximately a 925,000 ton inventory of coal based on the average of each of twelve months' ending inventories to support anticipated consumption. This methodology allows for an inventory of more than 925,000 tons at the beginning of high

demand periods and less than 925,000 tons entering the shoulder months. This inventory level aids in protecting SCE&G against availability, production and delivery problems that may arise from time to time. It also affords the resources to meet our supply needs when short-term market prices are unfavorable. It is always important to balance short-term decisions against long-term requirements and future operating conditions.

Q. HOW DOES THE COMPANY DETERMINE THE "REASONABLE PRICE" FOR FUEL PURCHASES?

A. Fuel Procurement must look for an optimization between adequate supplies of acceptable quality at reasonable purchase prices with the ultimate value of the delivered fuel (coal or oil) determined by the actual measured heat rate efficiency in the operation of our generating plants. Markets are volatile and fluctuate due to such things as seasonality, political turmoil, national weather trends and supply/demand imbalances. SCE&G strives to use a variety of pricing mechanisms among coal contracts to mitigate or normalize the effects on prices created by changes in market conditions and indexes by staying close to market, balancing adequate inventories against long-term contract supplies, spot market purchases and contract options. In addition to strategically managing our current assets, SCE&G stays current with developing trends and fundamental changes taking place in the industry and receives key

marketing information. This information flow is integral in our ongoing analysis of current or prospective coal costs and market comparability.

Q. SUMMARIZE THE QUANTITY, QUALITY, AND TERM OF THE COMPANY'S COAL PURCHASES.

A. During the Review Period, the Company purchased approximately 5.1 million tons of coal under long term agreements and 1.1 million tons of spot purchases. Long term agreements represented approximately 82% of the requirement for the Company's five coal-fired stations, and GENCO's Williams Station. For the February 2008 through January 2009 period, the Company projects to have long-term contracts with 8 suppliers totaling 4.7 million tons of coal representing approximately 76% of the total receipts depending on final contract negotiations. The quality ranges are from 12,200 to 13,000 BTU per pound and sulfur contents from 1.0% to 1.5%. Most of these contracts are for a period of two to four years with some options to renew. The amount of coal under contract will vary from year to year. In some of our coal contracts, we have been successful in negotiating fixed pricing for the term of the contract. Other coal contracts contain predetermined price adjustments.

Q. WHAT HAS OCCURRED REGARDING COAL PRICES AND TRANSPORTATION RATES IN THE PAST YEAR?

A. Coal market prices have become extremely volatile since November 2007 with f.o.b. mine prices rising approximately $40 per ton (from

approximately mid $40s/ton). The price increase and volatile market are driven by new global demand, mining and transportation problems in foreign coal producing countries, coal mining constraints in the U.S. and an unprecedented increase in U.S. coal exports.

SCE&G negotiated two coal contracts during the Review Period and two spot opportunities. Transportation rates are confidential. Our existing rail contract escalated only moderately during the Review Period. We are anticipating substantial increases in freight rates for our next contract beginning January 1, 2009.

SCE&G continues to expand its coal specifications by purchasing coal of lower quality and blending it with better quality to achieve acceptable levels. SCE&G also diversifies its coal supply and transportation with some import coal purchases thereby protecting against possible domestic supply and transportation constraints as occurred in 2004.

Q. WHAT WERE SCE&G'S DELIVERED COAL COSTS FOR THE REVIEW PERIOD?

A. Exhibit No. ___ (GH-1), entitled "Coal Purchased For Steam Plants", displays the average cost in dollars per MMBTU (million British Thermal Units) by month for coal purchased during the Review Period.

Q. WHAT HAS BEEN THE RECENT PRICING TREND IN THE NO. 2 FUEL OIL INDUSTRY?

A. Delivered fuel oil prices during the Review Period remained volatile reflecting the actions of OPEC, increasing domestic and global demand led by economic growth in China and India and, political instability in Nigeria, Venezuela and the Middle East. Oil prices and volatility have been regularly reported in the public press. During the past year, delivered prices varied from a monthly low of $1.79/gallon to a high of $2.72. Exhibit No. ___ (GH-2) shows the average system delivered No. 2 fuel oil prices in $/MMBTU for the Review Period.

Q. ARE THERE ANY OTHER THINGS THE COMPANY HAS DONE TO MITIGATE FUEL-RELATED EXPENSES THAT WILL IMPACT FUEL COSTS?

A. The Clean Air Act Amendment of 1990 called for electric utilities to reduce sulfur dioxide (SO2) emissions. An SO2 Emission Allowance Trading Market was established by the Environmental Protection Agency (EPA) to assist utilities in managing the costs of complying with these new regulations. The Company has purchased SO2 allowances as part of our overall strategy to compensate for our SO2 emissions. SO2 emission allowance prices have decreased during the Review Period due to active and announced SO2 scrubber projects and are currently approximately $ 460 per allowance. Price volatility often reflects the actions of hedge funds and other financial organizations participating in the SO2 markets for speculative purposes which tend to increase allowance prices. The Fuel

Procurement Department also deals with NOx emission (nitrogen oxides) allowances.

Q. HAS SCE&G MADE REASONABLE EFFORTS TO MINIMIZE ITS FUEL COSTS?

A. Yes, the Fuel Procurement Department has made reasonable efforts to obtain reliable, high quality supplies of fuel and transportation at the lowest possible cost to SCE&G's customers.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

Exhibit No. ___ (GH-1)

Coal Purchased for Steam Plants

$/MMBTU

Feb. 07	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan. 08
$2.68	$2.52	$2.43	$2.52	$2.50	$2.57	$2.52	$2.48	$2.44	$2.48	$2.57	$2.53

Exhibit No. ___ (GH-2)

No. 2 Fuel Oil Purchased for Steam Plants

$/MMBTU

Feb. 07	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan. 08
$12.96	$14.72	$14.30	$15.31	$15.66	$16.36	$16.06	$17.75	$17.76	$19.50	$19.23	$19.74